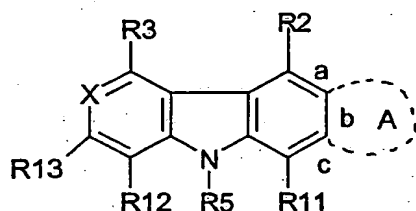


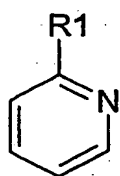
CLAIMS

1. Use of indole-derived compounds such as derivatives of benzo-indole or pyrido-indole corresponding to the following formula I:

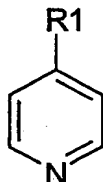


Formula I

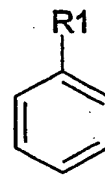
- when ring A is in position b: X represents N or CR₄ or N⁺R₄ anhydro base and cycle A corresponds to



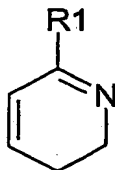
or



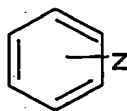
or



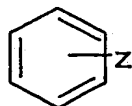
or



or



- 15 when cycle A is in position a or c: X represents N and cycle A corresponds to



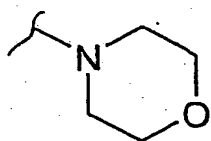
- 20 in which: R1 represents:

- an atom of hydrogen or halogen or a -C=N-OH or -O-C(=O)(CH₃) or -C≡N group, or

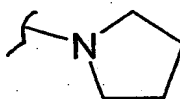
- a -N-R6R7 group,

where R6 and R7 represent independently of one another:

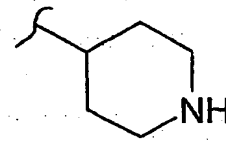
- a hydrogen atom,
- a ring at C6, saturated or unsaturated, possibly containing an atom of nitrogen and possibly substituted by one or more alkyl groups at C1 to C3, or
- a linear, branched and/or unsaturated alkyl group at C1 to C13 in which one or more atoms of carbon can be substituted by an atom of nitrogen, the aforementioned alkyl group being possibly substituted by one or more -OH and/or =O groups and/or by a group such as:



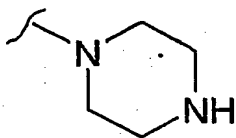
or



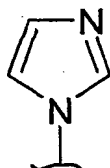
or



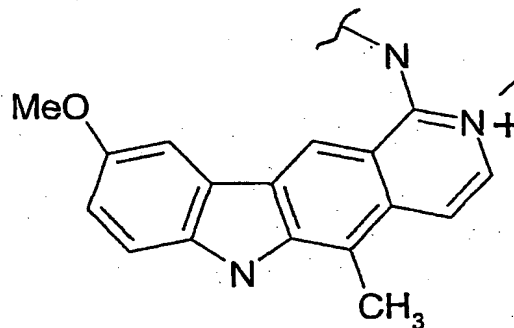
or



or



or



the aforementioned group being possibly substituted by an alkyl group at C1 to C3 which itself is possibly substituted by an amino group,

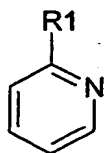
- a -NH-R8 group

where R8 represents an alkyl-N-R9R10 group

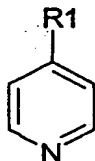
where the alkyl group represents a linear or branched group at C1 to C13 possibly unsaturated and/or substituted by one or more alkyl groups at C1 to C3 and/or hydroxyl groups,

- R9 and R10 represent independently of one another a hydrogen atom or an alkyl group at C1 to C4 possibly substituted by one or more hydroxyl and/or oxo groups, R2 represents a hydrogen atom, a methyl group or a
- 5 -NH-(CH₂)₃-N(CH₃)₂ group, or is absent when ring A is in position a,
- R3 represents a hydrogen atom, a halogen atom or a methyl, amino or methoxymethyl group, or -NH-R8 such as defined previously,
- 10 R4 represents a hydrogen atom, a hydroxyl or alkyl group at C1-C6 or a methoxy group possibly substituted by a phenyl group,
- R5 represents a hydrogen atom or a methyl or methoxymethyl group when X represents N or CR4 and R5 is absent when X
- 15 represents N⁺R4 anhydro base,
- Z represents a hydrogen atom or a hydroxyl or methoxy group or -O-alkyl-C=O(O-alkyl), with alkyl representing a group at C1-C6,
- R11 and R12 represent independently of one another a hydrogen atom or an alkyl group at C1-C3, and R11 is absent when ring A
- 20 is in position c,
- R13 represents a hydrogen atom or a methyl group, and the pharmaceutically acceptable salts of the aforementioned compounds, their isomers and/or mixtures,
- 25 for the preparation of a medication for the treatment of diseases related to pre-messenger RNA splicing processes within the cell.

2. Use according to claim 1, wherein the benzo-indole
- 30 derivatives are pyrido-carbazole derivatives, and in formula I, when X represents CR4, ring A represents



or



R1 represents a -N-R₆R₇ or -NH-R₈ group, a hydrogen atom, a
-C=N-OH or -O-C(=O)(CH₃) or -C≡N group,

R3 represents a hydrogen atom,

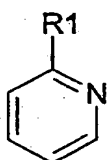
R4 represents a hydroxy group or a methoxy group possibly

5 substituted by a phenyl group,

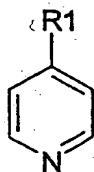
R13 represents a hydrogen atom, and

R2, R5, R6, R7, R8, R9, R10, R11 and R12 are such as defined
in claim 1.

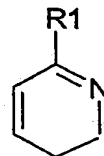
10 3. Use according to claim 1, wherein the pyrido-indole
derivatives are derivatives of pyrido-pyrrolo-isoquinoline,
and in formula I, when X represents N or N⁺R₄ anhydro base,
ring A represents



or



or



15

R1 represents a halogen atom, an amino group, -N-R₆R₇ or
-NH-R₈,

R2 represents a hydrogen atom or a methyl group,

20 R3 represents a hydrogen atom or a NH-R₈ group,

R4 represents a hydrogen atom or a methyl group,

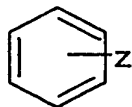
R5 represents a hydrogen atom or a methyl group when X
represents

N and R5 is absent when X represents N⁺R₄ anhydro base,

25 R11 represents a hydrogen atom or a methyl group, and

R6, R7, R8, R9, R10, R12 and R13 are such as defined in claim
1.

30 4. Use according to claim 1, wherein the pyrido-indole
derivatives are derivatives of benzo-pyrido-indole, and in
formula I, when X represents N, ring A represents



and is in position a, b or c,

R3 represents a halogen atom, an amino group, a -N-R6R7 or -NH-R8 group,

R5 represents a hydrogen atom or a methyl group,

5 R2 and R11 represent a hydrogen atom or a methyl group, or are respectively absent when ring A is in position a and c,

R13 represents a hydrogen atom, and

Z, R6, R7, R8, R9, R10 and R12 are such as defined in claim 1.

10 5. Use according to claim 1, wherein the compound is selected from the group comprised of:

- N'-(9-methoxy-5,6,11-trimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
- N'-(9-methoxy-6,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-
- 15 N,N-dimethyl-propane-1,3-diamine,
- 10-chloro-2,6-dimethyl-2H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline,
- 9-hydroxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl acetic acid ester,
- 20 - 1-(3-dimethylamino-propylamino)5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
- 9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-carbaldehyde oxime,
- N'(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-11-yl)-N,N-
- 25 dimethyl-propane-1,3-diamine,
- N,N-diethyl-N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- N'-(6,11-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-dimethyl-propane-1,3-diamine,
- 30 - allyl-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
- N,N-diethyl-N4-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-pentane-1,4-diamine,
- N,N-dimethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-propane-1,3-diamine,
- 35 - 9-methoxy-1-[6-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-hexylamino]-2,5-dimethyl-6H-pyrido[4,3-

- b]carbazol-2-ium iodide,
- {3-[4(3-amino-propyl)-piperazin-1-yl]-propyl}-9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
 - (3-imidazol-1-yl-propyl)-9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
 - 5 - (9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-(2,2,6,6-tetramethyl-piperidin-4-yl)-amine,
 - N-ethyl-N-[3-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propyl]-succinamic acid,
 - 10 - N-ethyl-N-[3-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-ylamino)-propyl]-succinamic acid,
 - 5,11-dimethyl-1-(3-methyl-butylamino)-6H-pyrido[4,3-b]carbazol-9-ol,
 - 2-{(2-hydroxy-ethyl)-[3-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-ylamino)propyl]-amino-ethanol,
 - 15 - N,N-diethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-ethane-1,2-diamine,
 - N'-(9-benzyloxy-6-methoxymethyl-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-diethyl-propane-1,3-diamine,
 - 20 - 1-(3-diethylamino-propylamino)-6-methoxymethyl-5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
 - 9-methoxy-5-methyl-4,6-dihydro-3H-pyrido[4,3-b]carbazol,
 - N-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-propane-1,3-diamine,
 - 25 - 1-(3-diethylamino-propylamino)-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-9-ol,
 - N-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
 - 30 - N-3-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-1-diethyl-butane-1,3-diamine,
 - N,N-diethyl-N'-(9-methoxy-5,6,11-trimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-ethane-1,2-diamine,
 - N-(6,11-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N'-ethyl-propane-1,3-diamine,
 - 35 - N-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,

- N'-(5,6-dimethyl-5H-pyrido[3'4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-dimethyl-propane-1,3-diamine,
- N-(5,6-dimethyl-5H-pyrido[3'4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N'-ethyl-propane-1,3-diamine,
- 5 - 9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-carbonitrile,
- 1-(3-diethylamino-propylamino)-5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
- (9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-(3-morpholin-4-yl-propyl)-amine,
- 10 - N-ethyl-N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- N-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-pentane-1,5-diamine,
- N-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-hexane-
- 15 1,6-diamine,
- N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-ethane-1,2-diamine,
- N,N-diethyl-N'-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- 20 - (9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-(2-pyrrolidin-1-yl-ethyl)-amine,
- 3-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propane-1,2-diol,
- 1-diethylamino-3-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propan-2-ol,
- 25 - (3-imidazol-1-yl-propyl)-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-amine,
- decyl-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
- 30 - N-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-butane-1,4-diamine,
- 8-methyl-11-(3-methylamino-propylamino)-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- 1-diethylamino-3-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propan-2-ol,
- 35 - N,N-diethyl-N'-(9-methoxy-5,6-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-ethane-1,2-diamine,

- N,N-diethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-propane-1,3-diamine,
- N-1,N-10-Bis-(3-diethylamino-propyl)-3,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline-1,10-diamine,
- 5 - N-ethyl-N'-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- N-(5,6-dimethyl-5H-benzo[f]pyrido[4,3]indol-1-yl)-N'-ethyl-propane-1,3-diamine,
- N'-(9-methoxy-5,6-dimethyl-5H-benzo[f]pyrido[4,3-b]indol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
- 10 - 1-(3-dimethylamino-propylamino)-5,6-dimethyl-5H-benzo[f]pyrido[4,3-b]indol-9-ol,
- N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N'-methyl-propane-1,3-diamine,
- 15 - 5-(7-chloro-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-3-yloxy)-pentanoic acid ethyl ester,
- N,N-dimethyl-N'-(10,11-dimethyl-10H-pyrido[3'4':4,5]pyrrolo[3,2-g]quinoline)-4-yl-propane-1,3-diamine,
- 20 - N,N-diethyl-N'-(10,11-dimethyl-10H-pyrido[3'4':4,5]pyrrolo[3,2-g]quinoline)-4-yl-propane-1,3-diamine,
- N'-(7-methoxy-10,11-dimethyl-10H-pyrido[2,3-b]carbazol-4-yl)-N,N-dimethyl-propane-1,3-diamine,
- 25 - N,N-diethyl-N'-(7-methoxy-10,11-dimethyl-10H-pyrido[2,3-b]carbazol-4-yl)-propane-1,3-diamine,
- 9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl-amine,
- N,N-diethyl-N'-(7-methoxy-11-methyl-10H-pyrido[2,3-b]carbazol-4-yl)-propane-1,3-diamine,
- 30 - N,N-diethyl-N'-(11-methyl-10H-pyrido[3',4':4,5]pyrrolo[3,2-g]quinoline)-4-yl-propane-1,3-diamine,
- N,N-diethyl-N'-(7-methoxy-5,11-dimethyl-10H-pyrido[2,3-b]carbazol-4-yl)-propane-1,3-diamine,
- N,N-dimethyl-N'-(11-methyl-10H-pyrido[3',4':4,5]pyrrolo[3,2-g]quinoline)-4-yl-propane-1,3-diamine,
- 35 - 11-(3-dimethylamino-propylamino)-8-ethyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,

- 7-(3-diethylamino-propylamino) 10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-4-ol,
- 11-(3-dimethylamino-propylamine)-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- 5 - N'-(3-methoxy-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N'-8-ethyl-3-methoxy-7-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- 11-(3-dimethylamino-propylamino)-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-2-ol,
- 10 - N,N-diethyl-N'-(3-methoxy-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- 11-(3-dimethylamino-propylamino)-7,8-dimethyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- 15 - 7-(3-dimethylamino-propylamino)-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-4-ol,
- N'-(2-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N'-(10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-N,N-diethyl-propane-1,3-diamine,
- 20 - N'-(7,8-dimethyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N,N-dimethyl-N'-(10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- 25 - 7-(3-diethylamino-propylamino)-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-3-ol,
- N,N-diethyl-N'-(10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- 4-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamine,
- 30 - N,N-diethyl-N'-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- N'-(4-methoxy-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-N,N-dimethyl-propane-1,3-diamine,
- 35 - 7-(3-(dimethylamino-propylamino)-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-4-ol,
- N,N-dimethyl-N'-(8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-

- yl)-propane-1,3-diamine,
- 11-(3-dimethylamino-2-methyl-propylamino)-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-propane-1,3-diamine,
- 5 - 11-(3-amino-propylamino)-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- N-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- 10 - N'-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N'-(4-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N-(3-amino-propyl)N'-[3-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-ylamino)-propyl]butane-1,4-
- 15 diamine,
- N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-hexane-1,6-diamine,
- N-[3-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamino)-propyl]-propane-1,3-diamine,
- 20 - N-[3-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamino)-propyl]-N-methyl-propane-1,3-diamine,
- N-[3-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-ylamino)-propyl]-propane-1,3-diamine,
- 25 - N-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N'-ethyl-propane-1,3-diamine,
- 6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl-amine.

30 6. Use according to claims 1 and 2, wherein the compound is selected from the group comprised of:

- N'-(9-methoxy-5,6,11-trimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
- N'-(9-methoxy-6,11-dimethyl-5H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
- 35 - 9-hydroxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl acetic acid ester,

- 1-(3-dimethylamino-propylamino)-5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
- 9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-carbaldehyde oxime,
- 5 - N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N,N-diethyl-N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- allyl-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
- 10 - N,N-diethyl-N4-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-pentane-1,4-diamine,
- 9-methoxy-1-[6-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-hexylamino]-2,5-dimethyl-6H-pyrido[4,3-b]carbazol-2-ium iodide,
- 15 - {3-[4(3-amino-propyl)-piperazin-1-yl]-propyl}-9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
- (3-imidazol-1-yl-propyl)-9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
- 20 - (9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-(2,2,6,6-tetramethyl-piperidin-4-yl)-amine,
- N-ethyl-N-[3-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propyl]-succinamic acid,
- 5,11-dimethyl-1-(3-methyl-butylamino)-6H-pyrido[4,3-b]carbazol-9-ol,
- 25 - N'-(9-benzyloxy-6-methoxymethyl-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-diethyl-propane-1,3-diamine,
- 1-(3-diethylamino-propylamino)-6-methoxymethyl-5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
- 30 - 9-methoxy-5-methyl-4,6-dihydro-3H-pyrido[4,3-b]carbazol,
- 1-(3-diethylamino-propylamino)-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-9-ol,
- N-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- 35 - N,N-diethyl-N'-(9-methoxy-5,6,11-trimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-ethane-1,2-diamine,
- N-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-

- propane-1,3-diamine,
- 9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-carbonitrile,
 - 1-(3-diethylamino-propylamino)-5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
 - 5 - (9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-(3-morpholin-4-yl-propyl)-amine,
 - N-ethyl-N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
 - N-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-
 - 10 pentane-1,5-diamine
 - N-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-hexane-1,6-diamine,
 - N'-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-ethane-1,2-diamine,
 - 15 - N,N-diethyl-N'-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
 - (9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-(2-pyrrolidin-1-yl-ethyl)-amine,
 - 3-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-
 - 20 propane-1,2-diol,
 - 1-diethylamino-3-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propan-2-ol,
 - decyl-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
 - 25 - 1-diethylamino-3-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propan-2-ol,
 - N,N-diethyl-N'-(9-methoxy-5,6-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-ethane-1,2-diamine,
 - N-ethyl-N'-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
 - 30 - N'-(7-methoxy-10,11-dimethyl-10H-pyrido[2,3-b]carbazol-4-yl)-N,N-dimethyl-propane-1,3-diamine,
 - N,N-diethyl-N'-(7-methoxy-10,11-dimethyl-10H-pyrido[2,3-b]carbazol-4-yl)-propane-1,3-diamine,
 - 35 - 9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl-amine,
 - N,N-diethyl-N'-(7-methoxy-11-methyl-10H-pyrido[2,3-b]carbazol-4-yl)-propane-1,3-diamine,

- N,N-diethyl-N'-(7-methoxy-5,11-dimethyl-10H-pyrido[2,3-b]carbazol-4yl)-propane-1,3-diamine.

7. Use according to claims 1 and 4, wherein the
5 compound is selected from the group comprised of:

- 10-chloro-2,6-dimethyl-2H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline,
- N'-(6,11-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-dimethyl-propane-1,3-diamine,
- 10 - N,N-dimethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-propane-1,3-diamine,
- N-ethyl-N-[3-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-ylamino)-propyl]-succinamic acid,
- 2-{(2-hydroxy-ethyl)-[3-(6-methyl-5H-
15 pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-ylamino)propyl]-amino-ethanol,
- N,N-diethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-ethane-1,2-diamine,
- N-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-
20 10-yl)-propane-1,3-diamine,
- N-3-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-1-diethyl-butane-1,3-diamine,
- N-(6,11-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N'-ethyl-propane-1,3-diamine,
- 25 - N'-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-dimethyl-propane-1,3-diamine,
- N-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N'-ethyl-propane-1,3-diamine,
- (3-imidazol-1-yl-propyl)-(6-methyl-5H-
30 pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-amine,
- N,N-diethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-propane-1,3-diamine,
- N-1,N-10-Bis-(3-diethylamino-propyl)-3,6-dimethyl-5H-
pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline-1,10-diamine,
- 35 - N,N-dimethyl-N'-(10,11-dimethyl-10H-pyrido[3',4':4,5]pyrrolo[3,2-g]quinoline)4-yl-propane-1,3-diamine,

- N,N-diethyl-N'-(10,11-dimethyl-10H-pyrido[3',4':4,5]pyrrolo[3,2-quinoline)-4-yl-propane-1,3-diamine,
- N,N-diethyl-N'-(11-methyl-10H-pyrido[3',4':4,5]pyrrolo[3,2-g]quinoline)-4-yl-propane-1,3-diamine,
- N,N-dimethyl-N'-(11-methyl-10H-pyrido[3',4':4,5]pyrrolo[3,2-g]quinoline)-4-yl-propane-1,3-diamine,
- N-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N'-ethyl-propane-1,3-diamine,
- 6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl-amine.

8. Use according to claims 1 and 5, wherein the compound is selected from the group constituted by:

- N-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-butane-1,4-diamine,
- 8-methyl-11-(3-methylamino-propylamino)-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- N-(5,6-dimethyl-5H-benzo[f]pyrido[4,3]indol-1-yl)-N'-ethyl-propane-1,3-diamine,
- N'-(9-methoxy-5,6-dimethyl-5H-benzo[f]pyrido[4,3-b]indol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
- 1-(3-dimethylamino-propylamino)-5,6-dimethyl-5H-benzo[f]pyrido[4,3-b]indol-9-ol,
- N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N'-methyl-propane-1,3-diamine,
- 5-(7-chloro-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-3-yloxy)-pentanoic acid ethyl ester,
- 11-(3-dimethylamino-propylamino)-8-ethyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- 7-(3-diethylamino-propylamino)-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-4-ol,
- 11-(3-dimethylamino-propylamine)-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- N'-(3-methoxy-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N'-8-ethyl-3-methoxy-7-methyl-7H-benzo[e]pyrido[4,3-b]indol-

- 11-yl) -N,N-dimethyl-propane-1,3-diamine,
- 11-(3-dimethylamino-propylamino) -8-methyl-7H-benzo[e]pyrido[4,3-b]indol-2-ol,
- N,N-diethyl-N'-(3-methoxy-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl) -propane-1,3-diamine,
- 5 - 11-(3-dimethylamino-propylamino) -7,8-dimethyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- 7-(3-dimethylamino-propylamino) -10-methyl-11H-benzo[g]pyrido[4,3-b]indol-4-ol,
- 10 - N'-(2-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl) -N,N-dimethyl-propane-1,3-diamine,
- N'-(10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl) -N,N-diethyl-propane-1,3-diamine,
- N'-(7,8-dimethyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl) -N,N-dimethyl-propane-1,3-diamine,
- 15 - N,N-dimethyl-N'-(10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl) -propane-1,3-diamine,
- 7-(3-diethylamino-propylamino) -10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-3-ol,
- 20 - N,N-diethyl-N'-(10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl) -propane-1,3-diamine,
- 4-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamine,
- N,N-diethyl-N'-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl) -propane-1,3-diamine,
- 25 - N'-(4-methoxy-10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl) -N,N-dimethyl-propane-1,3-diamine,
- 7-(3-(dimethylamino-propylamino) -10,11-dimethyl-11H-benzo[g]pyrido[4,3-b]indol-4-ol,
- 30 - N,N-dimethyl-N'-(8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl) -propane-1,3-diamine,
- 11-(3-dimethylamino-2-methyl-propylamino) -8-methyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,
- N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl) -propane-1,3-diamine,
- 35 - 11-(3-amino-propylamino) -8-methyl-7H-benzo[e]pyrido[4,3-b]indol-3-ol,

- N-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- N'-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- 5 - N'-(4-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N,N-dimethyl-propane-1,3-diamine,
- N-(3-amino-propyl)N'-[3-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-ylamino)-propyl]butane-1,4-diamine,
- 10 - N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-hexane-1,6-diamine,
- N-[3-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamino)-propyl]-propane-1,3-diamine,
- N-[3-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamino)-propyl]-N-methyl-propane-1,3-diamine,
- 15 - N-[3-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-ylamino)-propyl]-propane-1,3-diamine.

9. Use according to any one of the preceding claims,
- 20 wherein the compound selected from the group comprised of:
- N'-(9-methoxy-5,6,11-trimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
 - N'-(9-methoxy-6,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-N,N-dimethyl-propane-1,3-diamine,
 - 25 - 10-chloro-2,6-dimethyl-2H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline,
 - 1-(3-dimethylamino-propylamino)5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
 - N'(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-11-yl)-N,N-
 - 30 dimethyl-propane-1,3-diamine,
 - allyl-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
 - N,N-diethyl-N4-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-pentane-1,4-diamine,
 - 35 - 9-methoxy-1-[6-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-hexylamino]-2,5-dimethyl-6H-pyrido[4,3-b]carbazol-2-ium iodide,

- (3-imidazol-1-yl-propyl)-9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-amine,
- (9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-(2,2,6,6-tetramethyl-piperidin-4-yl)-amine,
- 5 - N-ethyl-N-[3-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propyl]-succinamic acid,
- N-ethyl-N-[3-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-ylamino)-propyl]-succinamic acid,
- 5,11-dimethyl-1-(3-methyl-butylamino)-6H-pyrido[4,3-b]carbazol-9-ol,
- 10 - N,N-diethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-ethane-1,2-diamine,
- 1-(3-diethylamino-propylamino)-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-9-ol,
- 15 - N,N-diethyl-N'-(9-methoxy-5,6,1-trimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-ethane-1,2-diamine,
- N'-(5,6-dimethyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl)-N,N-dimethyl-propane-1,3-diamine,
- 1-(3-diethylamino-propylamino)-5-methyl-6H-pyrido[4,3-b]carbazol-9-ol,
- 20 - N,N-diethyl-N'-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-propane-1,3-diamine,
- 1-diethylamino-3-(9-methoxy-5-methyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propan-2-ol,
- 25 - N-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-butane-1,4-diamine,
- N,N-diethyl-N'-(9-methoxy-5,6-dimethyl-6H-pyrido[4,3-b]carbazol-1-yl)-ethane-1,2-diamine,
- N,N-diethyl-N'-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline-10-yl)-propane-1,3-diamine,
- 30 - N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-N'-methyl-propane-1,3-diamine,
- 4-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamine,
- 35 - N-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-yl)-propane-1,3-diamine,
- N'-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-

N,N-dimethyl-propane-1,3-diamine,

- N-[3-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamino)-propyl]-N-methyl-propane-1,3-diamine,
- 6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-yl-amine.

10. Use according to claim 1, wherein the splicing processes are either constitutive or dependent on ESE, ISE, ESS or ISS regulatory sequences.

11. Use according to claim 10, wherein the splicing processes are either constitutive or dependent on ESE regulatory sequences.

12. Use according to claim 1, wherein the diseases related to the splicing process are genetic diseases resulting from splicing-process modification and are notably Frasier syndrome, frontotemporal dementia related to chromosome 17 (a form of Parkinson's), Leigh syndrome (a type of encephalopathy), atypical cystic fibrosis, certain neuropathologies, such as in particular Alzheimer's, related to Tau protein mutation, amyotrophy that influences the SMN (survival motor neuron) gene, depression related to disturbances in serotonin splicing and certain cancers in which the overall splicing process is affected (notably breast cancer, colon cancer and certain lymphomas).

13. Use according to claim 1, wherein the diseases related to the splicing process are diseases of viral origin for which ESE splicing sequences are identified.

14. Use according to claim 13, wherein the viral disease is AIDS.

15. Use according to claim 1, wherein said medicine also includes an excipient that makes it possible to formulate the compounds according to formula I.

16. Use according to claim 15, wherein said medicine is presented in solid or liquid form to be prepared and administered by intravenous route.

5

17. 10-chloro-2,6-dimethyl-2H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinoline.

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18. (9-methoxy-6-methyl-6H-pyrido[4,3-b]carbazol-1-yl)-(2,2,6,6-tetramethyl-piperidin-4-yl)-amine.

19. N-ethyl-N-[3-(9-methoxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazol-1-ylamino)-propyl]-succinamic acid.

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20. N-ethyl-N-[3-(6-methyl-5H-pyrido[3',4':4,5]pyrrolo[2,3-g]isoquinolin-10-ylamino)-propyl]-succinamic acid.

20

21. 9-methoxy-5-methyl-4,6-dihydro-3H-pyrido[4,3-b]carbazole.

22. N-(3-amino-propyl)N'-[3-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-ylamino)-propyl]butane-1,4-diamine.

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23. N-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-yl)-hexane-1,6-diamine.

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24. N-[3-(3-methoxy-10-methyl-11H-benzo[g]pyrido[4,3-b]indol-7-ylamino)-propyl]-propane-1,3-diamine.

25. N-[3-(3-methoxy-8-methyl-7H-benzo[e]pyrido[4,3-b]indol-11-ylamino)-propyl]-propane-1,3-diamine.

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26. Compound according to any of claims 9 to 17 as a medicine.